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ABSTRACT

This study compared the functional capability ratings of slides of children's facial appearances made by three different groups (30 each from special education, nursing, and child development programs) of child-care professional trainees and a comparison group of 30 non child-care graduate and undergraduate students. Subjects were shown 30 photographic slides selected from clinical and non-clinical sources which represented three experimental conditions: developmentally normal children: developmentally abnormal children; and children who had been craniofacial surgical patients. Each subject completed a Child Comparison Instrument rating form for each slide. The rating form asked each subject to rate the slide on 10 characteristics. Additionally, background information on each subject and a self-rating given by each subject were obtained. Among the results it was found that (1) there was a significant relationship between facial appearance and assessments of functional capability given by all pre-service child care workers: (2) children with unattractive facial appearances were consistently given lower ratings than children with attractive facial appearances: (3) there was no evidence that the effects of professional preparation made any meaningful contribution to the judgment of capability of attractive and unattractive children: and (4) the relationships between self-characteristics, preparation, and experience and the extent of influence that appearance has on ratings of intelligence were found to be vague and non-significant. (Author/MP)

Executive Summary

Effects of Pre-service Preparation and Children's Facial Characteristics on Child Care Workers' Assessments of Handicapped and Nonhandicapped Children

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The following information summarizes the research project submitted as a thesis to the Graduate School at the Pennsylvania State University in partial fulfillment of the requirements for the degree of Doctor of Philosophy. The study was funded and conducted from May 1, 1978 through April 30, 1979 under grant # G 007800004, Bureau of Education for the Handicapped. A copy of the full thesis is also included with this report.

Statement of the Problem

The current educational emphasis on "mainstreaming" handicapped children and providing them with the least restrictive environment for development has the potential for greatly expanding each handicapped child's social world. Efforts to enhance the child's spectrum of life means that the child is likely to come into contact with more people in general, and more professional service providing groups specifically. Included within the service provider groups are medical and health care professionals, special educators, child care workers, early childhood educators, and other child development specialists.

While it is usual to question whether young handicapped children are ready for their expanding social world, it is equally important to question whether the professionals with whom they will have contact will be ready for them. If such professionals hold biases against the handicapped child or if they have negative expectancies about that child's development, the outcome of their interaction could be detrimental. Negative expectancies that lead to a self-fulfilling prophecy of low achievement, poor adjustment, and limited social competence for visibly impaired children need to be avoided if educational mainstreaming is to succeed.

For many professional groups, prior experience with young handicapped children has been very limited. The question then arises, how will these professionals respond to the child? Do the child's stimulus characteristics, such as physical appearance, create biases in their

overall judgment of functional capabilities? Are some persons more inclined to be biased than others? If so, what characteristics in their background explain this susceptibility? Can training change the susceptibility to negative biases?

Answers to these questions are necessary if one is to describe the expectancy conditions that may be instrumental in influencing the caregivers' behavior. This can be particularly important for staff working with facially disfigured children who may be normal aside from their esthetic handicap.

The problem investigated in this study has three parts:

1. Do subjects with child-care-related training differentiate between diagnostically important facial cues and the general characteristic of the attractiveness of the child when assessing the functional capabilities of children?

2. Do groups of subjects with different types of pre-professional training differ from each other when assessing the functional capabilities of children?

3. Are personal factors, including self-assessments of subjects' own characteristics, preparation, and experience, related to their assessments of the functional capabilities of children?

Review of Literature

Smith and Neisworth (Neisworth, Jones, & Smith, 1977; Smith & Neisworth, 1975) describe somatopsychology as the study of the impact of bodily deviation on behavior which, combined with psychosomatics or impact of behavior on the body, constitutes a reciprocal and self-feeding vicious cycle of pathology. The outcome, or handicap, might be the sequelae of socially compounded behavior problems of body or behavior origins.

The stimulus properties and response limitations of the disabled child create a process of somatic deviance feedback. As a stimulus, physical appearance that is deviant in its social environment (depending on the sensitivity of that social environment) may be considered as a set of cues that set the occasion for certain behaviors of others. The response of the social environment acts to alter the behavior of the person presenting the cues.

Neisworth et al. (1977) discussed one's physical appearance as a specific set of cues. As these environmental response behaviors act to alter the behavior of the person presenting cues, the stigma of possessing a deviant feature increases. Meyerson (1963) suggested that children who have physical disabilities and stigmata tend to have more frequent and severe psychological problems than do their non-handicapped peers.

The cueing property of a feature is related to the clarity, or discriminability of the deviation. The degree to which an individual is reacted to as deviant is dependent on the visibility of the presenting cue. Katz (1977) stated that some children are undeniably unattractive, and they know it because adults show it. Many adults do not master their negative reactions to an unappealing youngster.

When children of deviant appearance are avoided or subjected to a reduced schedule of normal interaction, they are clearly deprived of opportunities for positive reinforcement and modeling of constructive behaviors. Frequently maladaptive behaviors force the attention of others who inadvertently reinforce them (Neisworth et al., 1977). The child whose face is scarred, whose eyes are assymetrical, whose mouth is deformed, may be able bodied in all respects, but is, nevertheless, handicapped and devalued.

Berscheid and Walster (1974) postulated the existence of a physical attractiveness stereotype where attractive persons are believed to possess more socially desirable characteristics and to be more intelligent than unattractive persons.

Miller (1970) identified a pattern of association of characteristics with physical attractiveness and unattractiveness. These tendencies are strong determinants of first impression formulation. A consistent pattern emerged from these data, that of the unattractive person being associated with the negative or undesirable pole of the adjective scales and the highly attractive person being judged significantly more positively. Dion, Berscheid, and Walster (1972) showed similar results of attractiveness. They stated that attractive people of both sexes were expected to be sexually warm and responsive, sensitive, kind, interesting, modest, sociable, and outgoing. Physically attractive people are perceived to be more likely to possess personalities deemed as socially desirable.

Clifford and Walster (1973) investigated the question of teacher judgments by attempting to influence teachers' expectations by manipulating the attractiveness of a photographed child presented to the teachers, and controlling objective information provided. Their hypothesis was that a child's attractiveness strongly influenced his or her teacher's judgments: the more attractive the child, the more biased in his favor teachers were expected to be. They demonstrated that unfamiliar attractive children would be rated as possessing greater intellectual potential, better social relations, and as more likely to become successful in life than unattractive children.

Similar conclusions have been reached by Lerner and Verdirame (1977). The psychosocial developmental milieu of the attractive child appears to be more favorable than that of the physically less attractive one. It was expected that the unattractive child experienced negative and rejecting peer relations, the perception of maladjustment

by both teachers and peers, as well as the belief of less educational ability by teachers. In such an interactional climate, the child might very likely have developed the very behavior and characteristics expected by others. The predicted covariation among attractiveness, peer and teacher appraisals, and actual functioning were supported.

Physical unattractiveness is a serious and debilitating esthetic handicap for some individuals. In an interview in the Clinic for Reconstructive Plastic Surgery, a patient stated to Macgregor (1974) "...My face is what separates me from humanity." For the facially deviant, prejudgments are usually derogatory, even stigmatizing, tending to hamper satisfactory social interaction. The unattractive child carries this stigma into his or her social world and it functions as a stimulus characteristic in the interaction process.

Some facial characteristics are, however, of diagnostic importance. They are indicators of genetic and/or environmental anomaly that may influence development or health. As such, child care professionals need to be sensitive to their existence and meaning.

The current study attempted to separate the dimension of attractiveness from that of diagnostic importance. In particular, the study compared the functional capability ratings of slides of children's facial pictures made by three groups of child care professionals-in-training and a comparison group of non-child care professionals. The slides had been selected and pretested to, as nearly as possible, make the dimensions of diagnostic loading and attractiveness orthogonal.

Methods

Subjects

The subjects of the study were 90 graduate and undergraduate students selected from volunteers enrolled in three types of child care programs: 30 each from special education, nursing, and child development. A comparison group of 30 undergraduate and graduate students enrolled in non-child care training majors were also included.

Stimulus Materials

Thirty photographic slides, all of good quality and of equivalent photographic content, were selected from clinical and non-clinical sources. The slides represented three experimental conditions: A) developmentally normal children, B) developmentally abnormal children, and C) children who had been craniofacial surgical patients. The slides in conditions A and B were selected from a larger pool of slides that were independently rated for attractiveness. For condition C, the slides represented pre- and post-operative photographs of the same child. The final set of stimulus materials represented five slides each of attractive/developmentally normal, unattractive/developmentally normal, attractive/developmentally abnormal, unattractive/developmentally abnormal, pre-operative, and post-operative children.

Measures

Each subject completed a Child Comparison Instrument rating for each slide. The rating form asked the subject to rate the child pictured on 10 characteristics. These were subsequently scored to produce five composite dimension scores: cognitive competence (a combination of intelligence and school achievement), perceptual motor competence (physical coordination, athletic ability, and motor performance), social competence, emotional competence (emotional stability and personality), and health. Additionally, background information on the respondent and a self-rating on 10 self-characteristics (intelligence, general appearance, academic performance, work satisfaction, skills with children, interpersonal effectiveness, assertiveness, self-confidence, flexibility, and personality) were obtained.

Procedures

Each subject was informed that the nature of the investigation was to ascertain individual differences in skills of observation. The slide photographs of children's faces were shown (approximately 45 seconds per slide) and each subject was instructed to observe the face and formulate and record a judgment of the functional capability of the child. Finally, each subject completed the information questionnaire and self-rating.

Design

The design was a mixed one involving both experimentally controlled variables (the slides' dimensions) and status variables (training program type and subject characteristics). Analyses were conducted considering the three child slide conditions (A-developmentally normal, B-developmentally abnormal, and C-craniofacial surgery) as replications for the analyses of the attractiveness and training variables. Regression techniques were used to analyze the association of subject characteristics and slide ratings.

Results

For each replication, the data were treated as a one-way analysis of variance with repeated measures (4 levels of professional preparation with repeated measures on attractiveness X functional capability factors). In each of the three replications, the between-subjects factor of professional preparation yielded no-significant ($p < .05$) F ratios as did the interaction of preparation X appearance. For all three replications there was a significant appearance effect and a significant interaction of appearance and capability factors ($p < .01$). Post hoc analyses of the appearance X capability factors using the Tukey WSD post hoc analysis procedures indicated differences in capabilities scores for attractive and unattractive children in each replication but a somewhat different pattern of differences across replications. These inter-competence differences suggest that ratings were made differentially and that the comparisons are not on the basis of a unitary construct.

In a regression analysis, the relationship of pre-service child care worker characteristics including self-ratings, level of preparation, and experience with ratings of the slides was explored. A stepwise multiple regression was conducted (N=120) to determine whether any characteristic of the subjects would be predictive of "sensitivity or reactivity" to physical appearance. Only 3% of the variation in the index of influence was found to be explained by the variables entered into the equation. The results were not significant.

Discussion

General findings of the study may be summarized as follows:

1. There was a significant relationship between facial appearance and assessments of functional capability given by all pre-service child care workers.

2. Children with unattractive facial appearance were consistently given lower ratings than children with attractive facial appearance.

3. There were significant differences between various functional capability scores for attractive and unattractive children.

4. There was no evidence that the effects of professional preparation made any meaningful contribution to the judgments of capability of attractive and unattractive children.

5. The results were inconclusive concerning the relationship between personal characteristics of the subjects and the extent to which they were influenced by appearance in judging intelligence, at least as measured here.

In the field of child care, professionals utilize their observation skills, combined with other techniques, to formulate their opinions, "objective" assessments, or expectations for the child. What one sees provides the basis for how one responds in diagnostic and professional activities. Physical appearance plays a significant part in shaping the professional's impression. Attractiveness and unattractiveness are potent elicitors of predictable impressions.

The facially attractive child brings about positive responses. Likewise, the facially unattractive child, particularly the abnormal looking child, produces a general negative response set. Unattractiveness of facial traits, the "social-mediating organ," triggers lower judgments in areas of cognitive, social, and motor competence. Clearly, this response set becomes a handicap for the "esthetically handicapped child." Precisely which characteristic plays the more important role is still open to question. In any case, the handicapped child with a visible stigma is socially disadvantated and limtied.

The attractiveness or unattractiveness of a child's face consistently produces significant differences in judgments for each of the three conditional groups identified. Because of the importance of recognizing identifiable clues in the face, this study included two groups of normal children, two groups of developmentally abnormal children and one group of the same children before and after cosmetic surgery, in order to expand the variable of appearance and include the notion of discriminating clinical clues in the face.

All three replications provided conclusive findings that facial appearance affected assessments of functional capabilities by all subjects. Of the three conditions, the group of children with facial surgery (Condition C) provided the most stringent testing criteria for the appearance variables. Other than age differences because of the post-surgical pictures having been taken at a later date, the pictures represented children categorized on the appearance variables only: attractiveness and unattractiveness. Extraneous variables are controlled for by the fact that the two groups are the same children at two points in time, with appearance manipulated. It may therefore be concluded with considerable confidence that attractive children were judged by the subjects, including pre-professional child care workers, to be more capable cognitively, social motorically, more emotionally stable, and to be healthier than unattractive children.

The results of the analyses provided no indication that professional preparation made any difference in pre-service child care workers' observation skills or in their ability to discriminate diagnostic cues. The higher preparation level child care professionals did not differ from the lower preparation subjects for any of the functional capability scores of attractive and unattractive children under any of the three conditions specified. As such, the findings do not provide any conclusive evidence that specialized training makes a difference. The responses from the specially prepared groups did not differ from those of pre-professionals with less exposure or education. It is not possible to say from these data that programs providing highly specialized training in assessment of exceptional children would have no effect. One would expect that training would make a difference in one's ability to discriminate important from unesthetic stigmata in diagnosing dysfunctional conditions. The training here, however, was neither controlled nor documented and could only be assumed to be appropriate based upon the criteria listed for the selection of subjects. Further, the students selected as subjects do not represent the highest level of professional expertise that exists in these professional areas.

The limitation of the training variable for this study would suggest that a carefully planned analysis of training effects should be undertaken to establish whether or not specialized training in objective assessment could make a difference in judgments of performance. Under experimental conditions, the specific observation skills could be taught in an experimental and control group design. Subsequent assessments of functional capability ratings would provide a more direct test of the hypothesis.

The relationships between self-characteristics, preparation, and experience and the extent of influence that appearance has on ratings of intelligence also were vague and unremarkable.

There is apparently no support at all for any contribution of one's self-comparison rating, level of preparation, or personal experience to one's influence by appearance. Further work would need to be done to identify any salient characteristics of the objective observer who would be uninfluenced by a child's attractiveness in judging the child's competence.

The "reactivity" of the social environment becomes an important issue in relationship to the "mainstreaming" emphasis. This sensitivity to potential stereotype reactions was explored in this study and provided information which can be applied in the natural settings of exceptional children and "normal" but less attractive children. With the trend toward mainstreaming, the integrated settings of handicapped and nonhandicapped children will provide child care workers with a wider range of physical and physiognomic variation.

Professionals in child care service need to be aware of their automatic negative predictions for those individuals who may possess deviant physical traits. Reactions to physical stigmata are rarely hidden. Children are well aware of their differences by the responses they evoke in others which may unfortunately interfere with their own development.

Plans for Dissemination

This report has been submitted to the Graduate School and will be listed with Dissertation Abstracts International. It has been presented at colloquia for the Nursing Department, Child Development Mental Retardation Center at the University of Washington, and for the Nursing Department at Rush University. It will be presented at the University of Colorado School Nurse Practitioner Program as an invited seminar, August 1979. The research will be reported at a symposium at the annual meeting of the National Association for the Education of Young Children in November 1979. A journal article length version will be submitted for publication consideration to Exceptional Children.

Finally, a summary of the study has been submitted to "International Documentation on Rehabilitation Research" and the NAEYC paper will be submitted to ERIC.